



TECHNICAL UNIVERSITY OF MOMBASA

School of Engineering and Technology

Department of Electrical and Electronic engineering

Diploma in Electrical Power Engineering

Electrical installation technology II
EEP 2203

END OF SEMESTER EXAMINATION

SERIES: MARCH 2025 2024

TIME: 2 HOURS

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **five** Questions;.

Attempt any **THREE** questions

Question ONE

- (a) (i) Define a damp situation.
(ii) Describe:
- (I) Requirement of cables installed in a damp situation.
 - (II) Two precautionary measures taken on long conduit runs in damp situations.
 - (III) The recommended wiring system in a cold store and the siting of control gear.
- (10 marks)
- (b) with reference to corrosion explain
- (i) Deep pitting
 - (ii) Cathodic protection
 - (iii) TWO methods of cathodic protection
- (10marks)

Question TWO

- (a) Explain: -
- (i) THREE factors to be considered in selecting a wiring system.
 - (ii) Diversity in electrical installation design and state TWO Advantages gained by its application.
- (10 marks)
- (b) Explain:-
- (i) Hazardous areas
 - (ii) Classifications of hazardous areas and the wiring system adopted for each class.
 - (iii) Flame proof enclosure for electrical apparatus.
- (10 marks)

Question THREE

- (a) State FOUR considerations to determine whether a building requires Lighting protection.
- (4 marks)
- (b) Explain:-
- (i) Lighting strike and the danger it poses
 - (ii) The parts of a building lighting protection system.
 - (iii) State the extent of a protected zone and how it can be extended.
- (16 marks)

Question FOUR

- (a) Explain the how static electricity is generated (4 marks)
- (b) State:
- (i) Dangers posed by static electricity.
 - (ii) How effects of static electricity are prevented.
- (6 marks)
- (b) Explain how factories produce atmospheric corrosive pollutants and list THREE of the more destructive ones. (4marks)
- (c) (i) State FOUR methods of protecting metals against corrosion.
- (ii) Explain why copper and aluminum are described as corrosion resistant while they are known to corrode
- (6 marks)

Question FIVE

- (a) Define and State regulation requirements of each of the following
- (i) temporary installation.
 - (ii) Caravan and caravan site
- (10 marks)
- (b) Explain FIVE factors to be considered to determine cable rating. (5 marks)
- (c) State the FOUR sensing elements used as heat detectors in fire alarm systems. (5 marks)